

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the following commentary.

I. Status of the Claims

Claims 1-29 were previously cancelled. Claims 34, 38, 49 and 55-56 are cancelled in this response without prejudice or disclaimer thereof. Applicants reserve the right to pursue the subject matter of any canceled claim in one or more continuing application. Claims 30, 35-37, 39, 41, 50, 54 and 57 have been amended for greater clarity, with exemplary support in the previous claims.

Because no new matter is introduced, Applicants respectfully request entry of this amendment. Upon entry, claims 30-33, 35-37, 39-48, 50-54 and 57-58 will be pending, with claims 32, 40, 42-48 and 51-53 withdrawn from consideration.

II. Rejection of Claims under 35 U.S.C. §112, first paragraph

Claims 30, 31, 33, 37-39, 54, 57 and 58 are rejected under 35 U.S.C. §112, first paragraph, for alleged lack of written description. Claims 30, 31, 33-39, 41, 49 and 50 are rejected under 35 U.S.C. §112, first paragraph, for alleged lack of enablement. Applicants respectfully traverse each ground of the rejections.

Particularly, the Examiner alleges that the inhibition of a polypeptide having at least 65% sequence identity to the sequence of SEQ ID NO: 1 by ribozymes, antibodies, aptamers, triplexes, peptides and miRNAs is not supported. However, the Examiner acknowledges that the use of a nucleic acid sequence complementary to the sequence of SEQ ID NO: 2 for the inhibition of hSGT is supported by the written description and is enabled. Moreover, the Examiner rejects claim 37 because the disease caused by the propagation of an undesired cell population was not sufficiently disclosed in the written description. Furthermore, the undesired

cell population whose propagation should be inhibited would not even be defined as expressing hSGT. However, the Examiner acknowledges that the written description in combination with the state of art enables the treatment of pancreas carcinoma by direct inhibition of hSGT.

Without acquiescing to the stated basis of the rejection, the claims have been amended to delete the recitation of any sequence homology and to recite siRNA and cancer as the only antagonist and disease, respectively. Moreover, siRNA can be used to inhibit the activity of polypeptide indirectly, i.e., by interfering with the translation of the peptide.

Accordingly, Applicants respectfully request withdrawal of the rejection.

III. Rejection of Claims under 35 U.S.C. §103(a)

Claims 30, 31, 33-35, 37-39, 41, 49, 50 and 54-56 are rejected under 35 U.S.C. §103(a) for allegedly being obvious over Angeletti *et al.*, *Cell stress & Chaperones*, 7:258-268 (2002) (“Angeletti”), Kordes *et al.*, *Genomics*, 52:90-94 (1998) (“Kordes”), Jadeski *et al.*, *Can. J. Physiol. Pharmacol.*, 80:125-135 (2002) (“Jadeski”), Gansuage *et al.*, *Cell Growth & Differentiation*, 9: 611-617 (1998) (“Gansuage”) and Bertrand *et al.*, *Biochemical and Biophysical Research Communications*, 296: 1000-1004 (2002) (“Bertrand”). Claims 30, 31, 33-39, 41, 49, 50 and 54-58 are rejected under 35 U.S.C. §103(a) for allegedly being obvious over Angeletti, Kordes, Jadeski, Gansuage and Bertrand, further in view of Elbashir *et al.*, *EMBO J.*, 20:6877-6888 (2001) (“Elbashir”), PCT Publication No. WO 2004/031237 by Nakamura *et al.* (“Nakamura”), Holen *et al.*, *Nucleic Acids Research*, 30: 1757-1766 (2002) (“Holen”) and Devroe *et al.*, *BMC Biotechnology*, 2:1-5 (2002) (“Devroe”). Applicants respectfully traverse each ground of the rejection.

The Examiner’s position is that the pending claims are obvious over the combined teachings of the cited art. According to the Examiner, Kordes describes the isolation and characterization of human SGT. Jadeski discloses that continuous overproduction of nitric oxide would lead to the interruption of the cell cycle and to apoptosis. Gansauge discloses that the

induction of nitric oxide synthesis in cell lines derived from pancreas carcinomas lead to apoptosis. According to Jadeski, the overexpression of heat shock protein 70 (HSP70) contributes to the resistance of cells against nitric oxide. Finally, Angeletti discloses that the expression of HSP70 would be down-regulated by SGT. Thus, it would have been obvious to inhibit the expression of hSGT to improve NO-homeostasis and to treat pancreas carcinoma because the negative regulation of HSP70 by SGT would have been demonstrated by Angeletti. As disclosed by Jadeski, HSP70 mediates the NO-resistance of cells.

However, the disclosure of the cited references teaches *away* from the claimed invention. If it is the case that HSP70 increases the NO-resistance of cells, then decreasing the amount of HSP70 in the cell is capable of increasing the sensitivity of the cells for NO-mediated apoptosis. Consequently, in view of Angeletti where it is shown that the expression of HSP70 is negatively regulated by SGT, one skilled in the art would try to *increase* cellular expression of SGT to minimize the expression of HSP70 and thereby, minimizing the resistance against nitric oxide. In contrast, the present application teaches that the propagation of cells is inhibited not by an *overexpression* of hSGT but rather by a *decreased expression* of hSGT. In view of the cited documents, one skilled in the art would not have any reason to consider the inhibition of hSGT expression useful for the destruction of cancer cells.

Accordingly, Applicants respectfully request withdrawal of the rejection because the claimed invention is non-obvious over the cited art.

CONCLUSION

The present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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